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DEPARTMENT OF STATE LANDS

MARC RACICOT, GOVERNOR
P.O. BOX 201601

STATE OF MONTANA

(406) 444-2074
1625 ELEVENTH AVENUE
HELENA, MONTANA 59620-1601

May 23, 1994

Dear Reader:

Enclosed for your review is an Environmental Assessment (EA) prepared by the Department of State Lands (DSL). The EA evaluates a proposal by Spokane Minerals, Inc. for expanding the quarry and process area. An application for an Operating Permit was required in place of the existing Small Miners Exclusion Statement.

Public comment on this EA will be received by the DSL until 5:00 p.m. on June 13, 1994. Comments should be about the adequacy of the EA in assessing issues, new information not considered that may influence the analysis, and clarification. Comments should be specific. The DSL will use these comments and staff responses, the EA, and the application to make a final decision on the permit. The decision will be to approve the proposal, or deny the proposal.

Comments should be directed to Bob Winegar at 444-2074 or sent to:

Bob Winegar
Montana Dept. of State Lands
PO Box 201601
Helena, MT 59620-1601

Thank you for your time and consideration. Please call the Department of State Lands (444-2074) if you have any questions.

Sincerely,

Bob Winegar

Robert C. Winegar
Program Supervisor
Hard Rock Bureau
Reclamation Division

enclosure

RCW/mm

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CHECKLIST ENVIRONMENTAL ASSESSMENT

Company Name: Spokane Minerals, Ltd. **Project: Limestone/$CaCO_3$ Quarry**

Type and Purpose of Action: Application for open-pit quarry for carbonate ore received September 13, 1993

Location: Sections 11 and 14, T9N, R1W, MPM **County: Broadwater**

BACKGROUND

Spokane Minerals, Ltd. (SML) has been operating at the south end of the Spokane Hills in Broadwater County under a Small Miners Exemption pursuant to the Montana Metal Mine Reclamation Act section 82-4-305, MCA. However, unreclaimed disturbances have increased beyond the 5 acres approved under their exemption. Due to this and a desire to increase annual production to 100,000 tons of material/yr which is greater than that allowed under the small miners exemption, SML has ceased operations and submitted an application to mine under an operating permit.

OPERATOR'S PROPOSED PLAN

Mining Plan

For approximately three months per year, an estimated 100,000 to 300,000 tons of limestone would be drilled, blasted, and crushed. For the remainder of the year, only loading and hauling would occur. The rock would be crushed on site, loaded from stockpiles for transport to the end user. Crushed limestone is sold for sugar manufacture, food additives, paper, decorative rock and for reclamation projects locally and regionally. Given the broad range of uses and grades, combined with the high purity of the deposit, there is expected to be very little waste generated from this operation. A portion of the output would be hauled to a railroad siding at Louisville, Montana, 4.9 miles away for transport. Some material may be temporarily stockpiled at that location.

Reclamation Plan

The goal of the reclamation plan would be to reclaim the proposed 23 acres of disturbed area for rangeland use. Soil would be salvaged from all areas of disturbance and stockpiled in four stockpile areas. Soil stockpiles would be seeded immediately and noxious weeds would be sprayed.

Carbonate material currently is deposited in the unnamed drainage just downgradient of the existing highwall. This material would be excavated and removed to reestablish the natural drainage. The disturbed areas would be graded, soiled to 6", and seeded with a prescribed seed mix. Pit benches would be soiled and seeded as final pushback occurs.

EXISTING ENVIRONMENT

The quarry is located on the south slope of the Spokane Hills which with the Belt Mountains encloses the northwest part of the Townsend Valley. The Spokane Hills appears as a spur detached from the Belt Mountains by the gorge of the Missouri River. The property consists of a series of steep ridges of uniquely pure white limestone containing 98 to 99.5 % $CaCO_3$ with minor impurities of MgO, AlO_3, and SiO_2. The deposit is characterized by its homogeneity, whiteness, brightness, and consistent purity. The mine area includes approximately 6 acres of disturbance. Currently, the crushing area is positioned in an unnamed ephemeral drainage just downgradient of the quarry area. The terrain is generally steep with 20-40% slopes. There are many outcrops, with scattered vegetation. The soil depths in the proposed permit area range from 4 to 12 inches. The quarry is accessed by existing ranch roads.

The quarry area is in a semi-arid region and runoff from this area does not affect the watershed of any existing creeks, rivers or water retention areas. There is no known water quality or flow data available from which to estimate ground water yields. It is assumed that the ground water yields from consolidated sedimentary and igneous rocks in the area are sufficient for any domestic and stock use. There are no wells within a two mile radius from the center of the project site.

There are no known or suspected protected or endangered species or critical habitat in the project area (see 4. Vegetation Cover). The plant community type is grassland with scattered evergreen trees and shrubs. The permit area and adjacent areas are used as nonirrigated rangeland.

IMPACTS ASSOCIATED WITH THE ALTERNATIVES CONSIDERED

Alternative 1 - No Action

The No Action alternative would result in the need for Spokane Minerals Ltd to reclaim back to their 5-acre limit pursuant to 82-4-305, MCA. Continued quarry development would be difficult at best due to area restrictions. No other impacts are foreseeable.

Alternative 2 - Approval of the Proposed Action

N = Not present or No Impact will occur.
Y = Impacts may occur (explain under Potential Impacts).

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. **GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:** Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	[N] There is carbonate material currently deposited in the small drainage downgradient of the proposed open pit. This material is ore and would be removed from the drainage and processed as soon as possible. Crushing would take place in an area not within the drainage.
2. **WATER QUALITY, QUANTITY AND DISTRIBUTION:** Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	[N] None. Only ephemeral drainages are associated with the proposed disturbances. Minimal waste would be generated. No material would be placed in drainages.
3. **AIR QUALITY:** Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I air-shed)?	[N] The work area, where crushing and stockpiling would occur, is aligned to shelter the operation from prevailing winds. The work area is subject to winds flowing directly from the south with the result that any available dust is blown directly into the quarry area. The hard rock exposed by the quarry operation would not be susceptible to wind erosion. All other surface disturbances and soil material stockpiles would be subject to some degree of wind erosion. Fugitive dust during active periods of quarry operation would be controlled by wetting. Margins of the haul roads, which would not be subject to further disturbance would be revegetated concurrent with mining. The contract crusher, A.M. Wells Inc., has a state Air Quality Permit.

4. **VEGETATION COVER, QUANTITY AND QUALITY:** Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[N] The operator has committed to having the proposed disturbance area surveyed for any sensitive plant species such as Townsendia.
5. **TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:** Is there substantial use of the area by important wildlife, birds or fish?	[N]
6. **UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:** Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	[N] No wetlands would be affected.
7. **HISTORICAL AND ARCHAEOLOGICAL SITES:** Are any historical, archaeological or paleontological resources present?	[N] Although there are no significant known archaeological or historical sites in the area, all operations would be conducted to prevent disruption or damage to any historical sites or archaeological occurrences.
8. **AESTHETICS:** Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	[Y] The project is on a sidehill at the south end of the Spokane Hills. The existing quarry is approximately 2 miles east of Highway 12 and is visible when heading north to Helena, in part, due to its bright white color. However, all public view of the project would be from vantage points greater than 2.3 miles from the site. Natural vegetative succession would allow native tree species to reestablish on the reclaimed quarry benches and would eventually decrease their visibility from Highway 12.
9. **DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:** Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?	[N]
10. **IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:** Are there other studies, plans or projects on this tract?	[N]

IMPACTS ON THE HUMAN POPULATION

RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
11. **HUMAN HEALTH AND SAFETY:** Will this project add to health and safety risks in the area?	[N]
12. **INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:** Will the project add to or alter these activities?	[N]
13. **QUANTITY AND DISTRIBUTION OF EMPLOYMENT:** Will the project create, move or eliminate jobs? If so, estimated number.	[Y] The work force required for this project is estimated to be 14 full-time seasonal employees while the mining operations occur and 2 employees the remainder of the year.
14. **LOCAL AND STATE TAX BASE AND TAX REVENUES:** Will the project create or eliminate tax revenue?	[N] The project would increase revenue.

15. **DEMAND FOR GOVERNMENT SERVICES:** Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc) be needed?	[N] Traffic along Highway 12/287 would not be interrupted by haul trucks, in part, because the roadway approach from the quarry to the highway has been widened to approximately 70 feet to provide an area for outgoing trucks to observe traffic conditions without delaying incoming truck traffic or regular highway traffic.
16. **LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:** Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N]
17. **ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:** Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N] The permit area occurs entirely on private land. A security gate is constructed across the haul road nears its junction with Highway 12 to discourage public access. In addition, the entrance to the access road and the mine area are posted with appropriate warning signs preventing admissions and warning the public of mining activities.
18. **DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:** Will the project add to the population and require additional housing?	[N]
19. **SOCIAL STRUCTURES AND MORES:** Is some disruption of native or traditional lifestyles or communities possible?	[N]
20. **CULTURAL UNIQUENESS AND DIVERSITY:** Will the action cause a shift in some unique quality of the area?	[N]
21. **OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:**	[Y] Noise levels in the mine area and along the haul road are expected to be above existing levels during working hours; however, it is assumed the operation would have minimal impact on noise levels. Night operations are not planned. Public nuisance and noise are expected to be minimal because of the location, duration and level of operations planned and the distance from nearby communities, 6 miles, and rural residences, 2 miles.

CUMULATIVE EFFECTS

The cattle ranch currently operates with no adverse impacts from the mining operation (personal communication Dolly McMasters). The private landowners currently allow some restricted hunting and backpacking on their property. During the summer a limited number of persons are allowed to access the private land for recreational purposes. During hunting season a very limited number of persons are allowed hunting privileges on the landowners property. No private timber sales are expected within the next two years. No public marinas or docks occur on the private property adjacent the Missouri River in the immediate area.

MAGNITUDE AND SIGNIFICANCE OF POTENTIAL IMPACTS

No significant impacts would occur.

RECOMMENDATIONS AND FURTHER ENVIRONMENTAL ANALYSIS:

Alternative 2 - the proposed action- is recommended. All issues indicated in the table given above were raised during the review process and were mitigated under subsequent revisions, prior to the completion of the environmental analysis.

[ ] EIS [ ] More Detailed EA [X] No Further Analysis

PUBLIC INVOLVEMENT

Public notice of the receipt of the permit application, and a notice of a three week public comment period for the EA was released May 19, 1993.

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION

None.

EA Checklist
Prepared By: Rebecca A. Miller — Geochemist
Name — Title

Approved By: Robert C. Winegar — Program Manager
Name — Title

Robert C. Winegar — 5/23/94
Signature — Date